

APPENDIX B:

Relationship between Recommendations of the Chesapeake Bay Supplement and Comprehensive Plan Policy

Within this Chesapeake Bay Supplement, 42 recommended actions (including three that are each stated twice) in five broad topical areas have been made. These recommendations propose actions that are related to implementation of Comprehensive Plan policy. This Appendix places each of these recommendations into the broader context of Comprehensive Plan policy; relevant citations are provided from the Environment section of the Policy Plan, and each recommendation is identified after the policy or policies it is intended to support. Comprehensive Plan text from the 2003 Edition of the Policy Plan is provided in black print; changes to the Environment section of the Plan that have been adopted concurrently with the adoption of this Chesapeake Bay Supplement are provided in green print, with strike-throughs and underscores to reflect the changes that have been made. Chesapeake Bay Supplement recommendations are provided in italicized blue print.

**Objective 2: Prevent and reduce pollution of surface and groundwater resources.
Protect and restore the ecological integrity of streams in Fairfax County.**

9. *Continue participation in the regional Occoquan Watershed management program.*
10. *Coordinate with neighboring jurisdictions to foster cooperation on regional water resource issues and request the participation of neighboring jurisdictions on applicable watershed management planning efforts. Continue to review and provide comments on development proposals outside of the County's boundaries that can affect the County's natural resources.*
11. *Continue to analyze and comment on land use and development activities proposed on federal, State, or other publicly-owned land that falls outside of the County's regulatory authority; through such comments and associated coordination, encourage development designs and practices that are consistent with the County's Comprehensive Plan.*
17. *Ensure that appropriate interagency coordination occurs in order to improve the consideration of stormwater management, BMP, and adequate outfall issues during the zoning process.*
18. *Ensure that appropriate interagency coordination occurs in order to improve the consideration of stormwater management, BMP and adequate outfall issues during the Plan amendment process.*
20. *Coordinate with the Virginia Department of Environmental Quality and other entities as appropriate on the development of TMDLs and implementation plans for impaired waters in Fairfax County.*
22. *Continue to pursue implementation of recommendations presented in the report of the New Millennium Occoquan Watershed Task Force.*

- 24. *Continue to implement the County's infiltration abatement program to maintain the integrity of the County's sanitary sewer network.*
- 26. *Continue existing nonpoint source pollution education efforts and, contingent on the availability of resources, strengthen outreach efforts to improve the land stewardship ethic among owners and managers of land in Fairfax County. Consistent with recommendations presented by the New Millennium Occoquan Watershed Task Force, pursue strengthened partnerships with appropriate public, nonprofit, and citizen organizations, encourage growth in the network of organizations and citizens groups concerned with and/or actively involved in watershed and water quality issues, sponsor/partner on an increased number of efforts to promote water quality and natural resource protection, and expand existing outreach and education programs.*
- 27. *Contingent on the availability of resources, strengthen outreach efforts to property owners with residential heating oil tanks to encourage improved maintenance, monitoring, and operation of these tanks.*
- 29. *Continue to implement the recommendations of the Infill and Residential Development Study as accepted by the Board of Supervisors on January 22, 2001.*

Policy b. Update BMP requirements as newer, more effective strategies become available.

- 13. *Amend the Public Facilities Manual to incorporate Low Impact Development Best Management Practices (BMPs) and other accepted innovative BMP practices as appropriate.*

Policy d. Preserve the integrity and the scenic and recreational value of stream valley EQCs when locating and designing storm water detention and BMP facilities. In general, such facilities should not be provided within stream valley EQCs unless they are designed to provide regional benefit or unless the EQCs have been significantly degraded. When facilities within the EQC are appropriate, encourage the construction of facilities that minimize clearing and grading, such as embankment-only ponds, or facilities that are otherwise designed to maximize pollutant removal while protecting, enhancing, and/or restoring the ecological integrity of the EQC.

- 19. *Revisit the current policy supporting the use of regional stormwater management facilities in light of the approach recommended in the March, 2003 report entitled "The Role of Regional Ponds in Fairfax County's Watershed Management." Prepare an amendment to the Comprehensive Plan to revise County policy as it relates to regional facilities for consideration by the Planning Commission and Board of Supervisors.*

Policy e. Update erosion and sediment regulations and enforcement procedures as new technology becomes available. Minimization and phasing of clearing and grading are the preferred means of limiting erosion during construction.

- 23. *Ensure that sufficient resources continue to be dedicated to the enforcement of erosion and sediment control requirements.*

Policy f. Where practical and feasible, retrofit older stormwater management facilities to perform water quality functions to better protect downstream areas from degradation.

16. Contingent on the availability of sufficient funding, retrofit existing stormwater management facilities to enhance their water quality and quantity control functions; continue to retrofit dry stormwater management facilities as wetland BMP facilities.

Policy h. Protect water resources by maintaining high standards for discharges from point sources.

1. If and when facilities that are subject to Virginia Pollutant Discharge Elimination System (VPDES) permits request zoning approvals, coordinate with the Virginia Department of Environmental Quality to identify any shortcomings in permit compliance and seek remedies to any such shortcomings.

Policy j. Regulate land use activities to protect surface and groundwater resources.

2. Review the County's current approach to adequate outfall and revise if necessary to ensure protection of downstream resources when development occurs. If determined to be appropriate, prepare an amendment to the Public Facilities Manual to revise adequate outfall requirements.

12. Explore the feasibility and desirability of establishing a self-supporting authority to provide for the management of on-site sewage disposal systems. Present recommendations regarding such an authority to the Board of Supervisors.

Policy k. For new development and redevelopment, apply better site design and low impact development (LID) ~~low impact site design~~ techniques such as those described below, and pursue commitments to reduce stormwater runoff volumes and peak flows, to increase groundwater recharge, and to increase preservation of undisturbed areas. In order to minimize the impacts that new development and redevelopment projects may have on the County's streams, some or all of the following practices should be considered where not in conflict with land use compatibility objectives:

- Minimize the amount of impervious surface created.
- Site buildings to minimize impervious cover associated with driveways and parking areas and to encourage tree preservation.
- Where feasible, convey drainage from impervious areas into pervious areas.
- Encourage cluster development when designed to maximize protection of ecologically valuable land.

- Encourage the preservation of wooded areas and steep slopes adjacent to stream valley EQC areas.
- Encourage fulfillment of tree cover requirements through tree preservation instead of replanting where existing tree cover permits. Commit to tree preservation thresholds that exceed the minimum Zoning Ordinance requirements.
- Where appropriate, use protective easements in areas outside of private residential lots as a mechanism to protect wooded areas and steep slopes.
- Encourage the use of open ditch road sections and minimize subdivision street lengths, widths, use of curb and gutter sections, and overall impervious cover within cul-de-sacs, consistent with County and State requirements.
- Encourage the use of innovative BMPs and infiltration techniques of stormwater management where site conditions are appropriate, if consistent with County requirements.
- Apply nonstructural best management practices and bioengineering practices where site conditions are appropriate, if consistent with County requirements.
- Encourage shared parking between adjacent land uses where permitted.
- Where feasible and appropriate, encourage the use of pervious parking surfaces in low-use parking areas.
- Maximize the use of infiltration landscaping within streetscapes consistent with County and State requirements.

13. Amend the Public Facilities Manual, to incorporate Low Impact Development Best Management Practices (BMPs) and other accepted innovative BMP practices as appropriate.

14. Consider whether changes to County policies regarding the placement of Low Impact Development BMP practices should be revised to allow for a broader application of such practices on individual privately-owned lots. Present recommendations regarding this matter to the Board of Supervisors.

15. Review the County's policies and Code requirements to determine if changes to the Public Facilities Manual, Zoning Ordinance, and/or other Code requirements would be appropriate consistent with Policy k of Objective 2 in the Environment section of the Policy Plan (supporting the application of better site design and low impact development techniques). Prepare appropriate amendments to these requirements for consideration by the Planning Commission and Board of Supervisors.

Policy l. Support watershed management planning and consider any watershed management plans that are adopted or endorsed by the Board of Supervisors as a factor in making land use decisions.

3. *Complete watershed management plans for all 30 of the County's watersheds.*
4. *Watershed management plans are currently being developed, and it can be anticipated that these plans will ultimately be adopted by the Board of Supervisors. Develop a mechanism to ensure that zoning and Plan amendment proposals will be reviewed within the context of adopted watershed management plans; establish standard operating procedures to ensure that the necessary interagency coordination occurs.*
5. *Implement the recommendations of adopted watershed management plans as funding allows. Establish a mechanism to prioritize and track actions on recommendations for capital improvement projects. Once a sufficient number of watershed management plans have been completed, establish a work program for the consideration of policy and regulatory changes to address policy actions recommended in adopted watershed management plans.*
6. *Explore the feasibility and desirability of establishing a self-supporting funding mechanism to provide for the implementation of projects recommended through the watershed management planning process. Present recommendations regarding funding mechanisms to the Board of Supervisors for consideration.*
9. *Continue participation in the regional Occoquan Watershed management program.*
10. *Coordinate with neighboring jurisdictions to foster cooperation on regional water resource issues and request the participation of neighboring jurisdictions on applicable watershed management planning efforts. Continue to review and provide comments on development proposals outside of the County's boundaries that can affect the County's natural resources.*

Policy m. Optimize stormwater management and water quality controls and practices for redevelopment consistent with revitalization goals.

34. *Develop recommendations for amendments to the County Code and/or Public Facilities Manual, as applicable, to consider the establishment of stormwater management requirements for redevelopment that will provide for reduced stormwater runoff peak volumes on developed sites that are currently not adequately served by such measures. Draft these recommendations in a manner that will allow for the consideration of whether to require redevelopment sites to achieve a certain reduction in peak volumes rather than allowing them to achieve the same hydrologic conditions that existed prior to redevelopment. The County already has a BMP requirement for redevelopment (a 10% reduction in phosphorus runoff compared with pre-redevelopment conditions); a requirement that is similar in nature to the BMP requirement could be pursued for stormwater quantity control.*

Policy n. Ensure that development and redevelopment sites that have been subject to contamination by toxic substances or other hazardous materials are remediated to the extent that they will not present unacceptable health or environmental risks for the specific uses proposed for these sites and that

unacceptable health or environmental risks will not occur as a result of contamination associated with nearby properties.

30/32. Incorporate Virginia Department of Environmental Quality (VDEQ) data regarding leaking storage tanks into the Department of Planning and Zoning's environmental assessment application to ensure that contamination on or near sites where such releases have occurred is considered appropriately during the consideration of infill development and redevelopment proposals during the zoning process.

31/33. Coordinate with VDEQ regarding the acquisition of information regarding other releases of contaminants (e.g., the Volunteer Remediation Program) in order to better screen for potential site contamination issues during the zoning process.

Objective 3: Protect the Potomac Estuary and the Chesapeake Bay from the avoidable impacts of land use activities in Fairfax County.

21. Coordinate with appropriate State agencies on the development of nutrient and sediment reduction strategies for the Shenandoah and Potomac River Basin.

Policy a. Ensure that new development and redevelopment complies with the County's Chesapeake Bay Preservation Ordinance, as applied to Chesapeake Bay Preservation Areas adopted by the Board of Supervisors as generally depicted in Figure 5 of the Chesapeake Bay Supplement to the Comprehensive Plan, as may be amended by the Board of Supervisors.

28. Conduct concurrent reviews and public hearings for exceptions from Chesapeake Bay Preservation Ordinance requirements in conjunction with other land use approval processes involving public hearings before the Planning Commission and Board of Supervisors

Policy b. Support the analysis and recommendations presented in the Chesapeake Bay Supplement to the Comprehensive Plan.

Policy c. Where tidal shoreline erosion control measures are needed, apply techniques that are consistent with the "Guidelines for Tidal Shoreline Erosion Control Measures" in the Environment Appendix.

35. Coordinate with State agencies, the Fairfax County Wetlands Board, and representative stakeholders, to develop recommended guidance for consideration by the Board of Supervisors regarding "active, detrimental shoreline erosion" for application as a County policy.

36. In coordination with State agencies, and contingent upon the availability of necessary resources, develop a process and related educational materials to ensure that tidal shoreline property owners are aware of information and advice pertaining to best shoreline stabilization practices as set forth and/or provided by the Virginia Institute of Marine Science, the Virginia Marine Resources Commission, and the Shoreline Erosion Advisory Service. As part of this effort, ensure that tidal shoreline property owners are provided information regarding the requirements of the Chesapeake Bay Preservation Ordinance, the Wetlands Zoning Ordinance, the Erosion and Sedimentation Control Ordinance and the Floodplain Regulations of the Zoning Ordinance.

37. *Advise the Wetlands Board of the newly adopted policy regarding tidal shoreline erosion control/stabilization practices and request that Wetlands Board decisions be consistent with this policy.*
38. *Request that the Virginia Institute of Marine Science (VIMS) update the Shoreline Situation Report and the Tidal Shoreline Marsh Inventory for Fairfax County's tidal shoreline. Ideally, this effort would include the following:*
- *Identify areas where tidal wetlands and riparian forest buffers adjacent to tidal wetlands can be restored;*
 - *Identify invasive plant species along the tidal shoreline and assist in developing ways to reduce invasive plant areas and restore native plants and submerged aquatic vegetation (SAV) to improve habitat value and enhance water quality protection;*
 - *Conduct field studies of shoreline erosion rates along sensitive reaches of the County's shoreline in order to better characterize the nature and extent of shoreline erosion than is possible from a review of published reports and an analysis of aerial photography; and*
 - *Conduct an analysis of physical conditions relating to shoreline erosion potential (e.g., soils, fetch, storm surge, slopes) along individual reaches of the County's tidal shoreline in order to characterize the susceptibility of each reach to erosion.*
- 39/40. *Continue to coordinate the review of all projects requiring approval of the County's Wetlands Board with the Department of Public Works and Environmental Services to ensure that all applicable regulatory requirements of the Chesapeake Bay Preservation Ordinance, the Erosion and Sedimentation Control Ordinance, and the Floodplain Regulations of the Zoning Ordinance are addressed and where appropriate that the applicant is aware of the need for additional permits and approvals.*

Policy d. Boating and other tidal shoreline access structures should be sited, designed, and constructed in a manner that minimizes adverse environmental impacts. Where County approval of tidal shoreline access structures is needed, the following guidelines should be consulted and considered in the decision-making process: the Chesapeake Bay Program's document entitled "Chesapeake Bay Area Public Access Technical Assistance Report;" and the following guidelines issued by the Virginia Marine Resources Commission: "Shoreline Development BMPs," "Wetlands Guidelines," and "Subaqueous Guidelines."

- 39/40. *Continue to coordinate the review of all projects requiring approval of the County's Wetlands Board with the Department of Public Works and Environmental Services to ensure that all applicable regulatory requirements of the Chesapeake Bay Preservation Ordinance, the Erosion and Sedimentation Control Ordinance, and the Floodplain Regulations of the Zoning Ordinance are addressed and where appropriate that the applicant is aware of the need for additional permits and approvals.*
41. *In coordination with State agencies, and contingent upon the availability of necessary resources, develop a process and related educational materials to ensure that tidal shoreline property owners are aware of information and advice pertaining to boating*

access best practices as set forth and/or provided by the Virginia Institute of Marine Science, the Virginia Marine Resources Commission, the Shoreline Erosion Advisory Service, and the Chesapeake Bay Program. As part of this effort, ensure that tidal shoreline property owners are aware of the requirements of the Chesapeake Bay Preservation Ordinance, the Wetlands Zoning Ordinance, the Erosion and Sedimentation Control Ordinance and the Floodplain Regulations of the Zoning Ordinance.

- 42. Advise the Wetlands Board of the newly adopted policy regarding tidal shoreline access structures and request that Wetlands Board decisions be consistent with this policy.*
- 43. Ensure that any new marinas that are constructed in Fairfax County will be fully in compliance with Chapter 570, Sanitary Regulations for Marinas and Boat Moorings, as promulgated by the Virginia Department of Health of the Commonwealth of Virginia. This Chapter implements the federal Clean Vessel Act through the Virginia Marina Program.*
- 44. As funding opportunities arise, advise owners and operators of marinas that are exempt from sanitary waste pump-out facility requirements of funding opportunities that may be available to provide such facilities.*
- 45. Contingent on the availability of necessary resources, pursue an outreach program in order to ensure that boaters are made aware of the available marina facilities in the County that are registered by the Commonwealth, that maintain current certificates to operate, and that have sanitary waste pump-out facilities that are available for general public use.*

Policy e. Support efforts to mitigate or compensate for losses of wetlands near the area(s) of impact.

- 25. Inform authorities responsible for wetland regulation of the County policy supporting wetland compensation and mitigation efforts near the area(s) of impact and request their consideration in implementing this policy through their permitting processes.*

Objective 6: Ensure that new development either avoids problem soil areas, or implements appropriate engineering measures to protect existing and new structures from unstable soils.

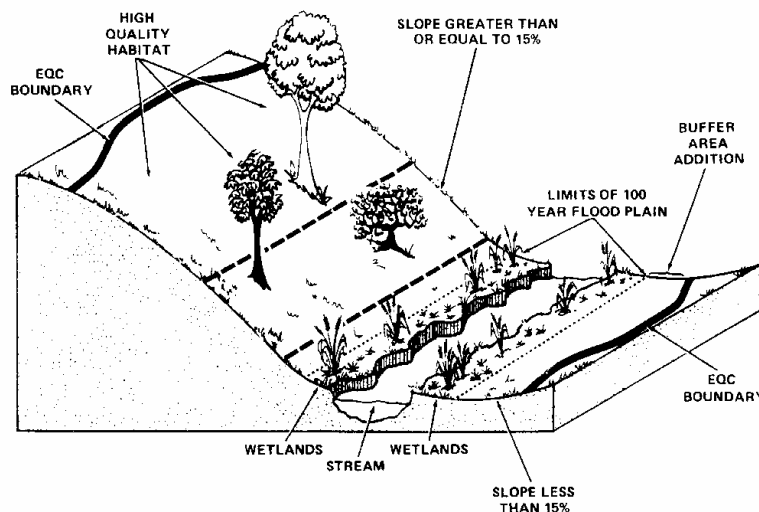
- 8. Coordinate with the Natural Resources Conservation Service and the Northern Virginia Soil and Water Conservation District on the completion of a revised soil survey for Fairfax County.*

Objective 9: Identify, protect and enhance an integrated network of ecologically valuable land and surface waters for present and future residents of Fairfax County.

Policy a: For ecological resource conservation, identify, protect and restore an Environmental Quality Corridor system (EQC). (See Figure 4.) Lands may be included within the EQC system if they can achieve any of the following purposes:

- Habitat Quality: The land has a desirable or scarce habitat type, or one could be readily restored, or the land hosts a species of special interest.
- "Connectedness": This segment of open space could become a part of a corridor to facilitate the movement of wildlife.
- Aesthetics: This land could become part of a green belt separating land uses, providing passive recreational opportunities to people.
- Pollution Reduction Capabilities: Preservation of this land would result in significant reductions to nonpoint source water pollution, and/or, micro climate control, and/or reductions in noise.

The core of the EQC system will be the County's stream valleys. Additions to the stream valleys should be selected to augment the habitats and buffers provided by the stream valleys, and to add representative elements of the landscapes that are not represented within stream valleys. The stream valley component of the EQC system shall include the following elements (See Figure 4):



A TYPICAL
ENVIRONMENTAL QUALITY CORRIDOR

Source: Fairfax County Office of Comprehensive Planning

FIGURE 4

- All 100 year flood plains as defined by the Zoning Ordinance;
- All areas of 15% or greater slopes adjacent to the flood plain, or if no flood plain is present, 15% or greater slopes that begin within 50 feet of the stream channel;

- All wetlands connected to the stream valleys; and
- All the land within a corridor defined by a boundary line which is 50 feet plus 4 additional feet for each % slope measured perpendicular to the stream bank. The % slope used in the calculation will be the average slope measured within 110 feet of a stream channel or, if a flood plain is present, between the flood plain boundary and a point fifty feet up slope from the flood plain. This measurement should be taken at fifty foot intervals beginning at the downstream boundary of any stream valley on or adjacent to a property under evaluation.

Modifications to the boundaries so delineated may be appropriate if the area designated does not benefit habitat quality, connectedness, aesthetics, or pollution reduction as described above. In addition, some intrusions that serve a public purpose such as unavoidable public infrastructure easements and rights of way are appropriate. Such intrusions should be minimized and occur perpendicular to the corridor's alignment, if practical.

8. *Coordinate with the Natural Resources Conservation Service and the Northern Virginia Soil and Water Conservation District on the completion of a revised soil survey for Fairfax County.*

26. *Continue existing nonpoint source pollution education efforts and, contingent on the availability of resources, strengthen outreach efforts to improve the land stewardship ethic among owners and managers of land in Fairfax County. Consistent with recommendations presented by the New Millennium Occoquan Watershed Task Force, pursue strengthened partnerships with appropriate public, nonprofit, and citizen organizations, encourage growth in the network of organizations and citizens groups concerned with and/or actively involved in watershed and water quality issues, sponsor/partner on an increased number of efforts to promote water quality and natural resource protection, and expand existing outreach and education programs.*

Objective 10: Conserve and restore tree cover on developed and developing sites. Provide tree cover on sites where it is absent prior to development.

7. *Consider the establishment of an obtainable tree cover goal for Fairfax County and/or some or all watersheds within Fairfax County. Prepare a recommended process to develop such a goal (or goals) for consideration by the Board of Supervisors.*

Policy a: Protect or restore the maximum amount of tree cover on developed and developing sites consistent with planned land use and good silvicultural practices.

Policy b: Require new tree plantings on developing sites which were not forested prior to development and on public rights of way.

Policy c: Use open space/conservation easements as appropriate to preserve woodlands, monarch trees, and/or rare or otherwise significant stands of trees, as identified by the County.

Objective 12: Improve the identification and mitigation of environmental impacts, and the monitoring and enforcement of environmental policies as applied to land disturbing activities.

8. *Coordinate with the Natural Resources Conservation Service and the Northern Virginia Soil and Water Conservation District on the completion of a revised soil survey for Fairfax County.*

APPENDIX 1

GUIDELINES FOR TIDAL SHORELINE EROSION CONTROL MEASURES

Measures to control erosion along the County's tidal shoreline are often pursued in order to protect adjacent property. Where County approval of tidal shoreline erosion control measures is needed, the following guidelines issued by the Virginia Marine Resources Commission should be consulted and considered in the decision-making process: "Shoreline Development BMPs," "Wetlands Guidelines," and "Subaqueous Guidelines." Consistent with these documents, shoreline protection structures should only be pursued where there is active, detrimental shoreline erosion which cannot be otherwise controlled, and such structures should be constructed in a manner that minimizes adverse wetlands impacts.

Shoreline stabilization approaches that apply biological techniques, using native plant species, are preferred where such approaches are consistent with the best available technical guidance, which may include guidance provided by the Virginia Marine Resources Commission, the Virginia Institute of Marine Science, and the Shoreline Erosion Advisory Service. Unless otherwise advised through such guidance, the following preferences, as refined from guidance developed by the Hampton Roads Planning District Commission and subsequently recommended for broader application in tidal areas by the Division of Chesapeake Bay Local Assistance of the Virginia Department of Conservation and Recreation (formerly the Chesapeake Bay Local Assistance Department), should be applied, where feasible, in determining the appropriate approaches to shoreline stabilization (with practices listed in decreasing order of preference):

Areas with Low Erosion Rates (< 1 ft/yr.) (low energy shorelines with an average fetch exposure of <1 nautical mile)

1. Vegetative stabilization with or without bank re-grading
2. Revetments
3. Bulkheads

Areas with Moderate Erosion Rates (1- 3 ft/yr.) (medium energy shorelines with an average fetch exposure of 1-5 nautical miles)

1. Vegetative stabilization with/or without bank grading
2. Revetments
3. Breakwaters
4. Groins*
5. Bulkheads

Areas with Severe Erosion Rates (> 3 ft/yr.)
(high energy shorelines with an average fetch exposure of > 5
nautical miles)

1. Relocation (of threatened structures)
2. Revetments
3. Breakwaters
4. Groins*
5. Seawalls

*Groins may not be appropriate in riverine conditions or where they may impede navigation.